

## PDS and Non-NASA Missions

### **Background**

The Planetary Data System (PDS) facilitates NASA's goals in solar system exploration by archiving and distributing digital science data produced by or relevant to NASA's planetary missions and research programs. Since data from non-NASA missions are likely to be relevant, NASA should strive to ensure that those data are also incorporated into the PDS archive, or are accessible through the PDS. In most cases special agreements will be needed with non-NASA agencies to guarantee access. The purpose of this document is to outline the issues that should be addressed in such agreements. Although non-NASA missions are both foreign and domestic, only foreign missions will be addressed explicitly here.

### **MOU Goals**

In negotiating agreements with other agencies, NASA should seek PDS or PDS-like access in exchange for services provided such as DSN tracking, NAIF support, and NASA-funded instruments. Non-NASA data should be either archived directly in the PDS or archived elsewhere following the PDS model as described in the *PDS Archive Preparation Guide*. Data product designs should be based on the *PDS Standards Reference* and *Planetary Science Data Dictionary Document*. Specifically, the following should be covered in the MOU:

- The MOU should emphasize that PDS standards are not just formats but rather a wide-ranging set of requirements that ensure usability:
  - Archiving should include scientific peer review by scientists not associated with the mission;
  - The archive should include all relevant documentation and all calibration, housekeeping, and geometry data as well as the science products themselves (in raw and processed form);
  - PDS representatives are available to assist and guide projects new to the archiving process, and they should be consulted regularly.
- Data from NASA-funded instruments should be archived with PDS as though the entire mission were funded by NASA, either instead of or in addition to being archived with any non-US archiving entity.
- Data should become available to U.S. planetary scientists at the same time they become available to scientists in the home country of any other archiving entity (with allowance for validation by mission personnel).
- Access to the data should be free (*e.g.*, electronic), although delivery of hard copies of data may require payment of a fee.
- A geographically distributed deep archive should be required by the MOU; PDS provides this through an agreement with NSSDC.
- The contact point within PDS should be specified — typically the manager of a PDS Discipline Node (the "lead node").

For other reasons, data sharing arrangements may need to be covered in the MOU. For example, close sharing of Rosetta observations of Deep Impact's encounter with comet Tempel 1 could be

facilitated by the MOU. Similarly, data sharing between the Huygens and Cassini teams could be covered. There may also be clauses regarding public release of selected data by NASA. Most of these special circumstances tend to be aimed at specific science teams and/or rapid sharing of data rather than the archiving process, however, so they will not be discussed further here.

## ***Procedural Issues***

It is important that PDS be aware of MOU negotiations, partly so that PDS can advise on content and wording but also so that PDS itself can plan for the activity. Ideally contact would be a continuing effort involving the Program Scientist and Program Executive for the mission as well as the PDS Program Executive. From the PDS side, the discussions should include the manager of the lead Discipline Node, the Project Manager, and the Project Scientist. Although direct PDS involvement in the negotiations is desirable, circumstances may require that PDS work iteratively with the relevant NASA personnel in negotiating the MOU.

If details are delegated to a Letter of Agreement with the interagency MOU merely making a general statement about archiving, it is important that the NASA MOU signatories pay close attention to the status of the Letter. Letter negotiations directly between PDS and the non-NASA mission may need occasional assistance from NASA Headquarters personnel. It is equally important that the lead contact (typically the manager of the lead Discipline Node) remain in close touch with the PDS Project Manager and Project Scientist.

Funding is another area that needs to be considered when negotiating the MOU. NASA must be satisfied that funding is available from the respective agencies to support both foreign and U.S. activities, including expanded PDS responsibilities and the deep archive.

Finally, someone at NASA HQ, presumably the Program Executive or the Program Scientist for the non-NASA mission, needs to stay in regular contact (through end of mission) with the PDS Program Executive, Project Manager, and manager of the lead Discipline Node to monitor archiving progress once operations begin.

## ***Reference Materials***

The following PDS documents are relevant to the MOU; dates indicate the latest hard copy or PDF version. All documents can be found at <http://pds.jpl.nasa.gov/documents/>.

*Proposer's Archiving Guide*, Version 1.0 (June 2003)

*Archive Preparation Guide* (3 May 2005)

*PDS Standards Reference*, Version 3.6 (August 2003)

*Planetary Science Data Dictionary Document*. (28 August 2002; on-line interactive version at [http://pds.jpl.nasa.gov/tools/data\\_dictionary\\_lookup.cfm](http://pds.jpl.nasa.gov/tools/data_dictionary_lookup.cfm) is more up-to-date on specific terms, but printable PDF remains a good source of background information)

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